



SEQUENCE LISTING

<110> BABICH, MICHAEL

<120> COMPOSITIONS OF MULTIMERIC PROFILIN FOR DIAGNOSIS AND
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<160> 31

<170> PatentIn Ver. 3.3

<210> 1

<211> 134

<212> PRT

<213> *Apium graveolens*

<400> 1

Met Ser Trp Gln Ala Tyr Val Asp Asp His Leu Met Cys Glu Val Glu
1 5 10 15

Gly Asn Pro Gly Gln Thr Leu Thr Ala Ala Ala Ile Ile Gly His Asp
20 25 30

Gly Ser Val Trp Ala Gln Ser Ser Thr Phe Pro Gln Ile Lys Pro Glu
35 40 45

Glu Ile Ala Gly Ile Met Lys Asp Phe Asp Glu Pro Gly His Leu Ala
50 55 60

Pro Thr Gly Leu Tyr Leu Gly Gly Ala Lys Tyr Met Val Ile Gln Gly
65 70 75 80

Glu Pro Asn Ala Val Ile Arg Gly Lys Lys Gly Ser Gly Gly Val Thr
85 90 95

Ile Lys Lys Thr Gly Gln Ala Leu Val Phe Gly Val Tyr Asp Glu Pro
100 105 110

Val Thr Pro Gly Gln Cys Asn Val Ile Val Glu Arg Leu Gly Asp Tyr
115 120 125

Leu Ile Asp Gln Gly Leu
130

<210> 2

<211> 131

<212> PRT

<213> *Arachis hypogaea*

<400> 2

Met Ser Trp Gln Thr Tyr Val Asp Asn His Leu Leu Cys Glu Ile Glu
1 5 10 15

Gly Asp His Leu Ser Ser Ala Ala Ile Leu Gly Gln Asp Gly Gly Val
20 25 30

Trp Ala Gln Ser Ser His Phe Pro Gln Phe Lys Pro Glu Glu Ile Thr
35 40 45

Ala Ile Met Asn Asp Phe Ala Glu Pro Gly Ser Leu Ala Pro Thr Gly
50 55 60

Leu Tyr Leu Gly Gly Thr Lys Tyr Met Val Ile Gln Gly Glu Pro Gly
65 70 75 80

Ala Ile Ile Pro Gly Lys Lys Gly Pro Gly Gly Val Thr Ile Glu Lys
85 90 95

Thr Asn Gln Ala Leu Ile Ile Gly Ile Tyr Asp Lys Pro Met Thr Pro
100 105 110

Gly Gln Cys Asn Met Ile Val Glu Arg Leu Gly Asp Tyr Leu Ile Asp
115 120 125

Thr Gly Leu
130

<210> 3

<211> 133

<212> PRT

<213> *Betula pendula*

<400> 3

Met Ser Trp Gln Thr Tyr Val Asp Glu His Leu Met Cys Asp Ile Asp
1 5 10 15

Gly Gln Ala Ser Asn Ser Leu Ala Ser Ala Ile Val Gly His Asp Gly
20 25 30

Ser Val Trp Ala Gln Ser Ser Ser Phe Pro Gln Phe Lys Pro Gln Glu
35 40 45

Ile Thr Gly Ile Met Lys Asp Phe Glu Glu Pro Gly His Leu Ala Pro
50 55 60

Thr Gly Leu His Leu Gly Gly Ile Lys Tyr Met Val Ile Gln Gly Glu
65 70 75 80

Ala Gly Ala Val Ile Arg Gly Lys Lys Gly Ser Gly Gly Ile Thr Ile
85 90 95

Lys Lys Thr Gly Gln Ala Leu Val Phe Gly Ile Tyr Glu Glu Pro Val
100 105 110

Thr Pro Gly Gln Cys Asn Met Val Val Glu Arg Leu Gly Asp Tyr Leu
115 120 125

Ile Asp Gln Gly Leu
130

<210> 4
<211> 131
<212> PRT
<213> Cynodon dactylon

<400> 4
Met Ser Trp Gln Ala Tyr Val Asp Asp His Leu Met Cys Glu Ile Glu
1 5 10 15

Gly His His Leu Thr Ser Ala Ala Ile Ile Gly His Asp Gly Thr Val
20 25 30

Trp Ala Gln Ser Ala Ala Phe Pro Ala Phe Lys Pro Glu Glu Met Ala
35 40 45

Asn Ile Met Lys Asp Phe Asp Glu Pro Gly Phe Leu Ala Pro Thr Gly
50 55 60

Leu Phe Leu Gly Pro Thr Lys Tyr Met Val Ile Gln Gly Glu Pro Gly
65 70 75 80

Ala Val Ile Arg Gly Lys Lys Gly Ser Gly Gly Val Thr Val Lys Lys
85 90 95

Thr Gly Gln Ala Leu Val Ile Gly Ile Tyr Asp Glu Pro Met Thr Pro
100 105 110

Gly Gln Cys Asn Met Val Ile Glu Lys Leu Gly Asp Tyr Leu Ile Glu
115 120 125

Gln Gly Met
130

<210> 5
<211> 131
<212> PRT
<213> Glycine max

<400> 5
Met Ser Trp Gln Ala Tyr Val Asp Asp His Leu Leu Cys Asp Ile Glu
1 5 10 15

Gly Asn His Leu Thr His Ala Ala Ile Ile Gly Gln Asp Gly Ser Val
20 25 30

Trp Ala Gln Ser Thr Asp Phe Pro Gln Phe Lys Pro Glu Glu Ile Thr
35 40 45

Ala Ile Met Asn Asp Phe Asn Glu Pro Gly Ser Leu Ala Pro Thr Gly

50

55

60

Leu Tyr Leu Gly Gly Thr Lys Tyr Met Val Ile Gln Gly Glu Pro Gly
65 70 75 80

Ala Val Ile Arg Gly Lys Lys Gly Pro Gly Gly Val Thr Val Lys Lys
85 90 95

Thr Gly Ala Ala Leu Ile Ile Gly Ile Tyr Asp Glu Pro Met Thr Pro
100 105 110

Gly Gln Cys Asn Met Val Val Glu Arg Pro Gly Asp Tyr Leu Ile Asp
115 120 125

Gln Gly Tyr
130

<210> 6

<211> 131

<212> PRT

<213> Glycine max

<400> 6

Met Ser Trp Gln Ala Tyr Val Asp Asp His Leu Leu Cys Gly Ile Glu
1 5 10 15

Gly Asn His Leu Thr His Ala Ala Ile Ile Gly Gln Asp Gly Ser Val
20 25 30

Trp Leu Gln Ser Thr Asp Phe Pro Gln Phe Lys Pro Glu Glu Ile Thr
35 40 45

Ala Ile Met Asn Asp Phe Asn Glu Pro Gly Ser Leu Ala Pro Thr Gly
50 55 60

Leu Tyr Leu Gly Gly Thr Lys Tyr Met Val Ile Gln Gly Glu Pro Gly
65 70 75 80

Ala Val Ile Arg Gly Lys Lys Gly Pro Gly Gly Val Thr Val Lys Lys
85 90 95

Thr Gly Ala Ala Leu Ile Ile Gly Ile Tyr Asp Glu Pro Met Thr Pro
100 105 110

Gly Gln Cys Asn Met Val Val Glu Arg Leu Gly Asp Tyr Leu Ile Asp
115 120 125

Gln Gly Tyr
130

<210> 7

<211> 133

<212> PRT

<213> Helianthus annuus

<400> 7

Met Ser Trp Gln Ala Tyr Val Asp Glu His Leu Met Cys Asp Ile Glu
1 5 10 15

Gly Thr Gly Gln His Leu Thr Ser Ala Ala Ile Leu Gly Leu Asp Gly
20 25 30

Thr Val Trp Ala Gln Ser Ala Lys Phe Pro Gln Phe Lys Pro Glu Glu
35 40 45

Met Lys Gly Ile Ile Lys Glu Phe Asp Glu Ala Gly Thr Leu Ala Pro
50 55 60

Thr Gly Met Phe Ile Ala Gly Ala Lys Tyr Met Val Leu Gln Gly Glu
65 70 75 80

Pro Gly Ala Val Ile Arg Gly Lys Lys Gly Ala Gly Gly Ile Cys Ile
85 90 95

Lys Lys Thr Gly Gln Ala Met Ile Met Gly Ile Tyr Asp Glu Pro Val
100 105 110

Ala Pro Gly Gln Cys Asn Met Val Val Glu Arg Leu Gly Asp Tyr Leu
115 120 125

Leu Glu Gln Gly Met
130

<210> 8

<211> 131

<212> PRT

<213> Hevea brasiliensis

<400> 8

Met Ser Trp Gln Ala Tyr Val Asp Asp His Leu Met Cys Glu Ile Glu
1 5 10 15

Gly Asn His Leu Ser Ala Ala Ala Ile Ile Gly Gln Asp Gly Ser Val
20 25 30

Trp Ala Gln Ser Ala Asn Phe Pro Gln Phe Lys Ser Glu Glu Ile Thr
35 40 45

Gly Ile Met Ser Asp Phe His Glu Pro Gly Thr Leu Ala Pro Thr Gly
50 55 60

Leu Tyr Ile Gly Gly Thr Lys Tyr Met Val Ile Gln Gly Glu Pro Gly
65 70 75 80

Ala Val Ile Arg Gly Lys Lys Gly Pro Gly Gly Val Thr Val Lys Lys
85 90 95

Thr Asn Gln Ala Leu Ile Ile Gly Ile Tyr Asp Glu Pro Met Thr Pro
100 105 110

Gly Gln Cys Asn Met Ile Val Glu Arg Leu Gly Asp Tyr Leu Ile Asp
115 120 125

Gln Gly Tyr
130

<210> 9
<211> 131
<212> PRT
<213> Hevea brasiliensis

<400> 9
Met Ser Trp Gln Thr Tyr Val Asp Glu Arg Leu Met Cys Glu Ile Glu
1 5 10 15

Gly Asn His Leu Thr Ala Ala Ala Ile Ile Gly Gln Asp Gly Ser Val
20 25 30

Trp Ala Gln Ser Ser Asn Phe Pro Gln Phe Lys Ser Glu Glu Ile Thr
35 40 45

Ala Ile Met Ser Asp Phe Asp Glu Pro Gly Thr Leu Ala Pro Thr Gly
50 55 60

Leu His Leu Gly Gly Thr Lys Tyr Met Val Ile Gln Gly Glu Ala Gly
65 70 75 80

Ala Val Ile Arg Gly Lys Lys Gly Pro Gly Gly Val Thr Val Arg Lys
85 90 95

Thr Asn Gln Ala Leu Ile Ile Gly Ile Tyr Asp Glu Pro Met Thr Pro
100 105 110

Gly Gln Cys Asn Met Ile Val Glu Arg Leu Gly Asp Tyr Leu Leu Glu
115 120 125

Gln Gly Met
130

<210> 10
<211> 131
<212> PRT
<213> Hevea brasiliensis

<400> 10
Met Ser Trp Gln Ala Tyr Val Asp Asp His Leu Met Cys Glu Ile Glu
1 5 10 15

Gly Asn His Leu Ser Ala Ala Ala Ile Ile Gly Gln Asp Gly Ser Val
20 25 30

Trp Ala Gln Ser Ala Asn Phe Pro Gln Phe Lys Ser Glu Glu Ile Thr
35 40 45

Gly Ile Met Ser Asp Phe His Glu Pro Gly Thr Leu Ala Pro Thr Gly

| | | |
|---|-----|---------|
| 50 | 55 | 60 |
| Leu Tyr Ile Gly Gly Thr Lys Tyr Met Val Ile Gln Gly Glu Pro Gly | | |
| 65 | 70 | 75 80 |
| Ala Val Ile Arg Gly Lys Lys Gly Pro Gly Gly Val Thr Val Lys Lys | | |
| | 85 | 90 95 |
| Thr Asn Gln Ala Leu Ile Ile Gly Ile Tyr Asp Glu Pro Met Thr Pro | | |
| | 100 | 105 110 |
| Gly Gln Cys Asn Met Ile Val Glu Arg Leu Gly Asp Tyr Leu Ile Asp | | |
| | 115 | 120 125 |
| Gln Gly Tyr | | |
| 130 | | |

<210> 11
 <211> 131
 <212> PRT
 <213> Hevea brasiliensis

| |
|---|
| <400> 11 |
| Met Ser Trp Gln Thr Tyr Val Asp Glu His Leu Met Cys Asp Ile Asp |
| 1 5 10 15 |
| Gly His His Leu Thr Ala Ala Ala Ile Ile Gly His Asp Gly Ser Val |
| 20 25 30 |
| Trp Ala Gln Ser Ser Ser Phe Pro Gln Phe Lys Pro Glu Glu Val Ala |
| 35 40 45 |
| Ala Ile Met Lys Asp Phe Asp Glu Pro Gly Ser Leu Ala Pro Thr Gly |
| 50 55 60 |
| Leu His Leu Gly Gly Thr Lys Tyr Met Val Ile Gln Gly Glu Pro Gly |
| 65 70 75 80 |
| Ala Val Ile Arg Gly Lys Lys Gly Ser Gly Gly Ile Thr Val Lys Lys |
| 85 90 95 |
| Thr Gly Gln Ala Leu Ile Ile Gly Ile Tyr Asp Glu Pro Leu Thr Pro |
| 100 105 110 |
| Gly Gln Cys Asn Met Ile Val Glu Arg Leu Gly Asp Tyr Leu Leu Glu |
| 115 120 125 |
| Gln Gly Met |
| 130 |

<210> 12
 <211> 131
 <212> PRT
 <213> Hevea brasiliensis

<400> 12

Met Ser Trp Gln Thr Tyr Val Asp Asp His Leu Met Cys Asp Ile Asp
1 5 10 15

Gly His Arg Leu Thr Ala Ala Ala Ile Ile Gly His Asp Gly Ser Val
20 25 30

Trp Ala Gln Ser Ser Ser Phe Pro Gln Phe Lys Ser Asp Glu Val Ala
35 40 45

Ala Ile Met Lys Asp Phe Asp Glu Pro Gly Ser Leu Ala Pro Thr Gly
50 55 60

Leu His Leu Gly Ser Thr Lys Tyr Met Val Ile Gln Gly Glu Pro Gly
65 70 75 80

Ala Val Ile Arg Gly Lys Lys Gly Ser Gly Gly Ile Thr Val Lys Lys
85 90 95

Thr Ser Gln Ala Leu Ile Ile Gly Ile Tyr Asp Glu Pro Leu Thr Pro
100 105 110

Gly Gln Cys Asn Met Ile Val Glu Arg Leu Gly Asp Tyr Leu Leu Glu
115 120 125

Gln Gly Met
130

<210> 13

<211> 131

<212> PRT

<213> Hevea brasiliensis

<400> 13

Met Ser Trp Gln Thr Tyr Val Asp Asp His Leu Met Cys Asp Ile Asp
1 5 10 15

Gly His Arg Leu Thr Ala Ala Ala Ile Ile Gly His Asp Gly Ser Val
20 25 30

Trp Ala Gln Ser Ser Gly Phe Pro Gln Phe Lys Ser Asp Glu Val Ala
35 40 45

Ala Val Met Lys Asp Phe Asp Glu Pro Gly Ser Leu Ala Pro Thr Gly
50 55 60

Leu His Leu Gly Gly Thr Lys Tyr Met Val Ile Gln Gly Glu Pro Gly
65 70 75 80

Ala Val Ile Arg Gly Lys Lys Gly Ser Gly Gly Ile Thr Val Lys Lys
85 90 95

Thr Gly Gln Ala Leu Ile Ile Gly Ile Tyr Asp Glu Pro Leu Thr Pro
100 105 110

Gly Gln Cys Asn Met Ile Val Glu Arg Leu Gly Asp Tyr Leu Leu Glu
115 120 125

Gln Gly Met
130

<210> 14
<211> 131
<212> PRT
<213> Hevea brasiliensis

<400> 14
Met Ser Trp Gln Thr Tyr Val Asp Asp His Leu Met Cys Asp Ile Asp
1 5 10 15

Gly His Arg Leu Thr Ala Ala Ala Ile Ile Gly His Asp Gly Ser Val
20 25 30

Trp Ala Gln Ser Ser Ser Phe Pro Gln Phe Lys Ser Asp Glu Val Ala
35 40 45

Ala Val Met Lys Asp Phe Asp Glu Pro Gly Ser Leu Ala Pro Thr Gly
50 55 60

Leu His Leu Gly Gly Thr Lys Tyr Met Val Ile Gln Gly Glu Pro Gly
65 70 75 80

Ala Val Ile Arg Gly Lys Lys Gly Ser Gly Gly Ile Thr Val Lys Lys
85 90 95

Thr Gly Gln Ala Leu Ile Ile Gly Ile Tyr Asp Glu Pro Leu Thr Pro
100 105 110

Gly Gln Cys Asn Met Ile Val Glu Arg Leu Gly Asp Tyr Leu Leu Asp
115 120 125

Gln Gly Leu
130

<210> 15
<211> 133
<212> PRT
<213> Mercurialis annua

<400> 15
Met Ser Trp Gln Thr Tyr Val Asp Asp His Leu Met Cys Asp Ile Asp
1 5 10 15

Gly Gln Gly Gln His Leu Ala Ala Ala Ser Ile Val Gly His Asp Gly
20 25 30

Ser Ile Trp Ala Gln Ser Ala Ser Phe Pro Gln Leu Lys Pro Glu Glu
35 40 45

Ile Thr Gly Ile Met Lys Asp Phe Asp Glu Pro Gly His Leu Ala Pro
 50 55 60
 Thr Gly Leu Tyr Ile Ala Gly Thr Lys Tyr Met Val Ile Gln Gly Glu
 65 70 75 80
 Ser Gly Ala Val Ile Arg Gly Lys Lys Gly Ser Gly Gly Ile Thr Ile
 85 90 95
 Lys Lys Thr Gly Gln Ala Leu Val Phe Gly Ile Tyr Glu Glu Pro Val
 100 105 110
 Thr Pro Gly Gln Cys Asn Met Val Val Glu Arg Leu Gly Asp Tyr Leu
 115 120 125
 Ile Glu Gln Gly Met
 130

<210> 16
 <211> 134
 <212> PRT
 <213> Olea europaea

<400> 16
 Met Ser Trp Gln Ala Tyr Val Asp Asp His Leu Met Cys Asp Ile Glu
 1 5 10 15
 Gly His Glu Asp His Arg Leu Thr Ala Ala Ala Ile Val Gly His Asp
 20 25 30
 Gly Ser Val Trp Ala Gln Ser Ala Thr Phe Pro Gln Phe Lys Pro Glu
 35 40 45
 Glu Met Asn Gly Ile Met Thr Asp Phe Asn Glu Pro Gly His Leu Ala
 50 55 60
 Pro Thr Gly Leu His Leu Gly Gly Thr Lys Tyr Met Val Ile Gln Gly
 65 70 75 80
 Glu Ala Gly Ala Val Ile Arg Gly Lys Lys Gly Ser Gly Gly Ile Thr
 85 90 95
 Ile Lys Lys Thr Gly Gln Ala Leu Val Phe Gly Ile Tyr Glu Glu Pro
 100 105 110
 Val Thr Pro Gly Gln Cys Asn Met Val Val Glu Arg Leu Gly Asp Tyr
 115 120 125
 Leu Val Glu Gln Gly Met
 130

<210> 17
 <211> 134
 <212> PRT
 <213> Olea europaea

<400> 17

Met Ser Trp Gln Ala Tyr Val Asp Asp His Leu Met Cys Asp Ile Glu
1 5 10 15

Gly His Glu Gly His Arg Leu Thr Ala Ala Ala Ile Val Gly His Asp
20 25 30

Gly Ser Val Trp Ala Gln Ser Ala Thr Phe Pro Gln Phe Lys Pro Glu
35 40 45

Glu Met Asn Gly Ile Met Thr Asp Phe Asn Glu Pro Gly His Leu Ala
50 55 60

Pro Thr Gly Leu His Leu Gly Gly Thr Lys Tyr Met Val Ile Gln Gly
65 70 75 80

Glu Ala Gly Ala Val Ile Arg Gly Lys Lys Gly Ser Gly Gly Ile Thr
85 90 95

Ile Lys Lys Thr Gly Gln Ala Leu Val Phe Gly Ile Tyr Glu Glu Pro
100 105 110

Val Thr Pro Gly Gln Cys Asn Met Val Val Glu Arg Leu Gly Asp Tyr
115 120 125

Leu Leu Glu Gln Gly Leu
130

<210> 18

<211> 134

<212> PRT

<213> Olea europaea

<400> 18

Met Ser Trp Gln Ala Tyr Val Asp Asp His Leu Met Cys Asp Ile Glu
1 5 10 15

Gly His Glu Gly His Arg Leu Thr Ala Ala Ala Ile Val Gly His Asp
20 25 30

Gly Ser Val Trp Ala Gln Ser Ala Thr Phe Pro Gln Phe Lys Pro Glu
35 40 45

Glu Met Asn Gly Ile Met Thr Asp Phe Asn Glu Pro Gly His Leu Ala
50 55 60

Pro Thr Gly Leu His Leu Gly Gly Thr Lys Tyr Met Val Ile Gln Gly
65 70 75 80

Glu Ala Gly Ala Val Ile Arg Gly Lys Lys Gly Ser Gly Gly Ile Thr
85 90 95

Ile Lys Lys Thr Gly Gln Ala Leu Val Phe Gly Ile Tyr Glu Glu Pro
100 105 110

Val Thr Pro Gln Gln Cys Asn Met Val Ala Glu Arg Leu Gly Asp Tyr
115 120 125

Leu Leu Glu Gln Gly Leu
130

<210> 19

<211> 131

<212> PRT

<213> Phleum pratense

<400> 19

Met Ser Trp Gln Thr Tyr Val Asp Glu His Leu Met Cys Glu Ile Glu
1 5 10 15

Gly His His Leu Ala Ser Ala Ala Ile Leu Gly His Asp Gly Thr Val
20 25 30

Trp Ala Gln Ser Ala Asp Phe Pro Gln Phe Lys Pro Glu Glu Ile Thr
35 40 45

Gly Ile Met Lys Asp Phe Asp Glu Pro Gly His Leu Ala Pro Thr Gly
50 55 60

Met Phe Val Ala Gly Ala Lys Tyr Met Val Ile Gln Gly Glu Pro Gly
65 70 75 80

Arg Val Ile Arg Gly Lys Lys Gly Ala Gly Gly Ile Thr Ile Lys Lys
85 90 95

Thr Gly Gln Ala Leu Val Val Gly Ile Tyr Asp Glu Pro Met Thr Pro
100 105 110

Gly Gln Cys Asn Met Val Val Glu Arg Leu Gly Asp Tyr Leu Val Glu
115 120 125

Gln Gly Met
130

<210> 20

<211> 131

<212> PRT

<213> Phleum pratense

<400> 20

Met Ser Trp Gln Thr Tyr Val Asp Glu His Leu Met Cys Glu Ile Glu
1 5 10 15

Gly His His Leu Ala Ser Ala Ala Ile Leu Gly His Asp Gly Thr Val
20 25 30

Trp Ala Gln Ser Ala Asp Phe Pro Gln Phe Lys Pro Glu Glu Ile Thr
35 40 45

Gly Ile Met Lys Asp Phe Asp Glu Pro Gly His Leu Ala Pro Thr Gly

50 55 60
 Met Phe Val Ala Gly Ala Lys Tyr Met Val Ile Gln Gly Glu Pro Gly
 65 70 75 80
 Ala Val Ile Arg Gly Lys Lys Gly Ala Gly Gly Ile Thr Ile Lys Lys
 85 90 95
 Thr Gly Gln Ala Leu Val Val Gly Ile Tyr Asp Glu Pro Met Thr Pro
 100 105 110
 Gly Gln Cys Asn Met Val Val Glu Arg Leu Gly Asp Tyr Leu Val Glu
 115 120 125
 Gln Gly Met
 130

<210> 21
 <211> 131
 <212> PRT
 <213> Phleum pratense

<400> 21
 Met Ser Trp Gln Thr Tyr Val Asp Glu His Leu Met Cys Glu Ile Glu
 1 5 10 15
 Gly His His Leu Ala Ser Ala Ala Ile Phe Gly His Asp Gly Thr Val
 20 25 30
 Trp Ala Gln Ser Ala Asp Phe Pro Gln Phe Lys Pro Glu Glu Ile Thr
 35 40 45
 Gly Ile Met Lys Asp Leu Asp Glu Pro Gly His Leu Ala Pro Thr Gly
 50 55 60
 Met Phe Val Ala Ala Ala Lys Tyr Met Val Ile Gln Gly Glu Pro Gly
 65 70 75 80
 Ala Val Ile Arg Gly Lys Lys Gly Ala Gly Gly Ile Thr Ile Lys Lys
 85 90 95
 Thr Gly Gln Ala Leu Val Val Gly Ile Tyr Asp Glu Pro Met Thr Pro
 100 105 110
 Gly Gln Cys Asn Met Val Val Glu Arg Leu Gly Asp Tyr Leu Val Glu
 115 120 125
 Gln Gly Met
 130

<210> 22
 <211> 131
 <212> PRT
 <213> Prunus avium

<400> 22

Met Ser Trp Gln Ala Tyr Val Asp Asp His Leu Met Cys Asp Ile Asp
1 5 10 15

Gly Asn Arg Leu Thr Ala Ala Ala Ile Leu Gly Gln Asp Gly Ser Val
20 25 30

Trp Ser Gln Ser Ala Thr Phe Pro Ala Phe Lys Pro Glu Glu Ile Ala
35 40 45

Ala Ile Leu Lys Asp Leu Asp Gln Pro Gly Thr Leu Ala Pro Thr Gly
50 55 60

Leu Phe Leu Gly Gly Thr Lys Tyr Met Val Ile Gln Gly Glu Ala Gly
65 70 75 80

Ala Val Ile Arg Gly Lys Lys Gly Ser Gly Gly Ile Thr Val Lys Lys
85 90 95

Thr Asn Gln Ala Leu Ile Ile Gly Ile Tyr Asp Glu Pro Leu Thr Pro
100 105 110

Gly Gln Cys Asn Met Ile Val Glu Arg Leu Gly Asp Tyr Leu Ile Glu
115 120 125

Gln Gly Leu
130

<210> 23

<211> 131

<212> PRT

<213> *Pyrus communis*

<400> 23

Met Ser Trp Gln Ala Tyr Val Asp Asp His Leu Met Cys Asp Ile Asp
1 5 10 15

Gly His His Leu Thr Ala Ala Ala Ile Leu Gly His Asp Gly Ser Val
20 25 30

Trp Ala Gln Ser Ser Thr Phe Pro Lys Phe Lys Pro Glu Glu Ile Thr
35 40 45

Ala Ile Met Lys Asp Phe Asp Glu Pro Gly Ser Leu Ala Pro Thr Gly
50 55 60

Leu His Leu Gly Gly Thr Lys Tyr Met Val Ile Gln Gly Glu Gly Gly
65 70 75 80

Ala Val Ile Arg Gly Lys Lys Gly Ser Gly Gly Val Thr Val Lys Lys
85 90 95

Thr Ser Gln Ala Leu Val Phe Gly Ile Tyr Glu Glu Pro Leu Thr Pro
100 105 110

Gly Gln Cys Asn Met Ile Val Glu Arg Leu Gly Asp Tyr Leu Ile Asp
115 120 125

Gln Gly Leu
130

<210> 24
<211> 131
<212> PRT
<213> Zea mays

<400> 24
Met Ser Trp Gln Thr Tyr Val Asp Glu His Leu Met Cys Glu Ile Glu
1 5 10 15

Gly His His Leu Thr Ser Ala Ala Ile Val Gly His Asp Gly Ala Thr
20 25 30

Trp Ala Gln Ser Thr Ala Phe Pro Glu Phe Lys Pro Glu Glu Met Ala
35 40 45

Ala Ile Met Lys Asp Phe Asp Glu Pro Gly His Leu Ala Pro Thr Gly
50 55 60

Leu Ile Leu Gly Gly Thr Lys Tyr Met Val Ile Gln Gly Glu Pro Gly
65 70 75 80

Ala Val Ile Arg Gly Lys Lys Gly Ser Gly Gly Ile Thr Val Lys Lys
85 90 95

Thr Gly Gln Ser Leu Ile Ile Gly Ile Tyr Asp Glu Pro Met Thr Pro
100 105 110

Gly Gln Cys Asn Leu Val Val Glu Arg Leu Gly Asp Tyr Leu Leu Glu
115 120 125

Gln Gly Met
130

<210> 25
<211> 131
<212> PRT
<213> Zea mays

<400> 25
Met Ser Trp Gln Ala Tyr Val Asp Glu His Leu Met Cys Glu Ile Glu
1 5 10 15

Gly His His Leu Ala Ala Ala Ala Ile Val Gly His Asp Gly Ala Ala
20 25 30

Trp Ala Gln Ser Thr Ala Phe Pro Glu Phe Lys Thr Glu Asp Met Ala
35 40 45

Asn Ile Met Lys Asp Phe Asp Glu Pro Gly His Leu Ala Pro Thr Gly
50 55 60

Leu Phe Leu Gly Pro Thr Lys Tyr Met Val Ile Gln Gly Glu Pro Gly
65 70 75 80

Ala Val Ile Arg Gly Lys Lys Gly Ser Gly Gly Ile Thr Val Lys Lys
85 90 95

Thr Gly Gln Ala Leu Val Val Gly Ile Tyr Asp Glu Pro Met Thr Pro
100 105 110

Gly Gln Cys Asn Met Val Val Glu Arg Leu Gly Asp Tyr Leu Leu Glu
115 120 125

Gln Gly Met
130

<210> 26
<211> 131
<212> PRT
<213> Zea mays

<400> 26
Met Ser Trp Gln Thr Tyr Val Asp Glu His Leu Met Cys Glu Ile Glu
1 5 10 15

Gly His His Leu Ser Ser Ala Ala Ile Val Gly His Asp Gly Ala Val
20 25 30

Trp Ala Gln Ser Thr Ala Phe Pro Gln Phe Lys Pro Glu Glu Met Thr
35 40 45

Asn Ile Ile Lys Asp Phe Asp Glu Pro Gly Phe Leu Ala Pro Ile Gly
50 55 60

Leu Phe Leu Gly Pro Thr Lys Tyr Met Val Ile Gln Gly Glu Pro Gly
65 70 75 80

Ala Val Ile Arg Gly Lys Lys Gly Ser Gly Gly Ile Thr Val Lys Lys
85 90 95

Thr Gly Gln Ala Leu Val Ile Gly Ile Tyr Asp Glu Pro Met Thr Pro
100 105 110

Gly Gln Cys Asn Met Val Val Glu Arg Leu Gly Asp Tyr Leu Val Glu
115 120 125

Gln Gly Leu
130

<210> 27
<211> 131
<212> PRT

<213> Zea mays

<400> 27

Met Ser Trp Gln Ala Tyr Val Asp Glu His Leu Met Cys Glu Ile Glu
1 5 10 15

Gly Gln His Leu Ser Ala Ala Ala Ile Val Gly His Asp Gly Ser Val
20 25 30

Trp Ala Gln Ser Glu Ser Phe Pro Glu Leu Lys Pro Glu Glu Val Ala
35 40 45

Gly Ile Ile Lys Asp Phe Asp Glu Pro Gly Thr Leu Ala Pro Thr Gly
50 55 60

Leu Phe Val Gly Gly Thr Lys Tyr Met Val Ile Gln Gly Glu Pro Gly
65 70 75 80

Val Val Ile Arg Gly Lys Lys Gly Thr Gly Gly Ile Thr Ile Lys Lys
85 90 95

Thr Gly Met Ser Leu Ile Ile Gly Val Tyr Asp Glu Pro Met Thr Pro
100 105 110

Gly Gln Cys Asn Met Val Val Glu Arg Leu Gly Asp Tyr Leu Ile Glu
115 120 125

Gln Gly Phe
130

<210> 28

<211> 131

<212> PRT

<213> Zea mays

<400> 28

Met Ser Trp Gln Ala Tyr Val Asp Asp His Leu Leu Cys Asp Ile Glu
1 5 10 15

Gly Gln His Leu Ser Ala Ala Ala Ile Val Gly His Asp Gly Ser Val
20 25 30

Trp Ala Gln Ser Glu Asn Phe Pro Glu Leu Lys Pro Glu Glu Val Ala
35 40 45

Gly Met Ile Lys Asp Phe Asp Glu Pro Gly Thr Leu Ala Pro Thr Gly
50 55 60

Leu Phe Val Gly Gly Thr Lys Tyr Met Val Ile Gln Gly Glu Pro Gly
65 70 75 80

Val Val Ile Arg Gly Lys Lys Gly Thr Gly Gly Ile Thr Ile Lys Lys
85 90 95

Thr Gly Met Ser Leu Ile Ile Gly Ile Tyr Asp Glu Pro Met Thr Pro

| | | |
|-----------------------------|-------------------------------------|-----|
| 100 | 105 | 110 |
| Gly Gln Cys Asn Met Val Val | Glu Arg Leu Gly Asp Tyr Leu Ile Glu | |
| 115 | 120 | 125 |

Gln Gly Phe
130

<210> 29
<211> 140
<212> PRT
<213> Homo sapiens

| |
|---|
| <400> 29 |
| Met Ala Gly Trp Asn Ala Tyr Ile Asp Asn Leu Met Ala Asp Gly Thr |
| 1 5 10 15 |

| |
|---|
| Cys Gln Asp Ala Ala Ile Val Gly Tyr Lys Asp Ser Pro Ser Val Trp |
| 20 25 30 |

| |
|---|
| Ala Ala Val Pro Gly Lys Thr Phe Val Asn Ile Thr Pro Ala Glu Val |
| 35 40 45 |

| |
|---|
| Gly Val Leu Val Gly Lys Asp Arg Ser Ser Phe Tyr Val Asn Gly Leu |
| 50 55 60 |

| |
|---|
| Thr Leu Gly Gly Gln Lys Cys Ser Val Ile Arg Asp Ser Leu Leu Gln |
| 65 70 75 80 |

| |
|---|
| Asp Gly Glu Phe Ser Met Asp Leu Arg Thr Lys Ser Thr Gly Gly Ala |
| 85 90 95 |

| |
|---|
| Pro Thr Phe Asn Val Thr Val Thr Lys Thr Asp Lys Thr Leu Val Leu |
| 100 105 110 |

| |
|---|
| Leu Met Gly Lys Glu Gly Val His Gly Gly Leu Ile Asn Lys Lys Cys |
| 115 120 125 |

| |
|---|
| Tyr Glu Met Ala Ser His Leu Arg Arg Ser Gln Tyr |
| 130 135 140 |

<210> 30
<211> 140
<212> PRT
<213> Homo sapiens

| |
|---|
| <400> 30 |
| Met Ala Gly Trp Gln Ser Tyr Val Asp Asn Leu Met Cys Asp Gly Cys |
| 1 5 10 15 |

| |
|---|
| Cys Gln Glu Ala Ala Ile Val Gly Tyr Cys Asp Ala Lys Tyr Val Trp |
| 20 25 30 |

| |
|---|
| Ala Ala Thr Ala Gly Gly Val Phe Gln Ser Ile Thr Pro Ile Glu Ile |
| 35 40 45 |

Asp Met Ile Val Gly Lys Asp Arg Glu Gly Phe Phe Thr Asn Gly Leu
 50 55 60
 Thr Leu Gly Ala Lys Lys Cys Ser Val Ile Arg Asp Ser Leu Tyr Val
 65 70 75 80
 Asp Gly Asp Cys Thr Met Asp Ile Arg Thr Lys Ser Gln Gly Gly Glu
 85 90 95
 Pro Thr Tyr Asn Val Ala Val Gly Arg Ala Gly Arg Val Leu Val Phe
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 Tyr Ser Met Ala Lys Tyr Leu Arg Asp Ser Gly Phe
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 <212> PRT
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<400> 31
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 Cys Gln Glu Ala Ala Ile Val Gly Tyr Cys Asp Ala Lys Tyr Val Trp
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 Ala Ala Thr Ala Gly Gly Val Phe Gln Ser Ile Thr Pro Ile Glu Ile
 35 40 45
 Asp Met Ile Val Gly Lys Asp Arg Glu Gly Phe Phe Thr Asn Gly Leu
 50 55 60
 Thr Leu Gly Ala Lys Lys Cys Ser Val Ile Arg Asp Ser Leu Tyr Val
 65 70 75 80
 Asp Gly Asp Cys Thr Met Asp Ile Arg Thr Lys Ser Gln Gly Gly Glu
 85 90 95
 Pro Thr Tyr Asn Val Ala Val Gly Arg Ala Gly Arg Ala Leu Val Ile
 100 105 110
 Val Met Gly Lys Glu Gly Val His Gly Gly Thr Leu Asn Lys Lys Ala
 115 120 125
 Tyr Glu Leu Ala Leu Tyr Leu Arg Arg Ser Asp Val
 130 135 140

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